04011-US

FIG.1

DEMODULATING UNIT (BASEBAND SIGNAL PROCESSING) 5

1

2

3 ANALOG BAND PASS FILTER

4 A/D CONVERTER

7 DIGITAL FILTER CONTROL UNIT

DATA

DIGITAL FILTER CONTROL SIGNAL

6 DIGITAL FILTER

DATA IN WHICH DISTORTION CAUSED BY ANALOG FILTER IS CORRECTED FOR

8 DETECTION ETC. PROCESSING UNIT

DEMODULATED DATA
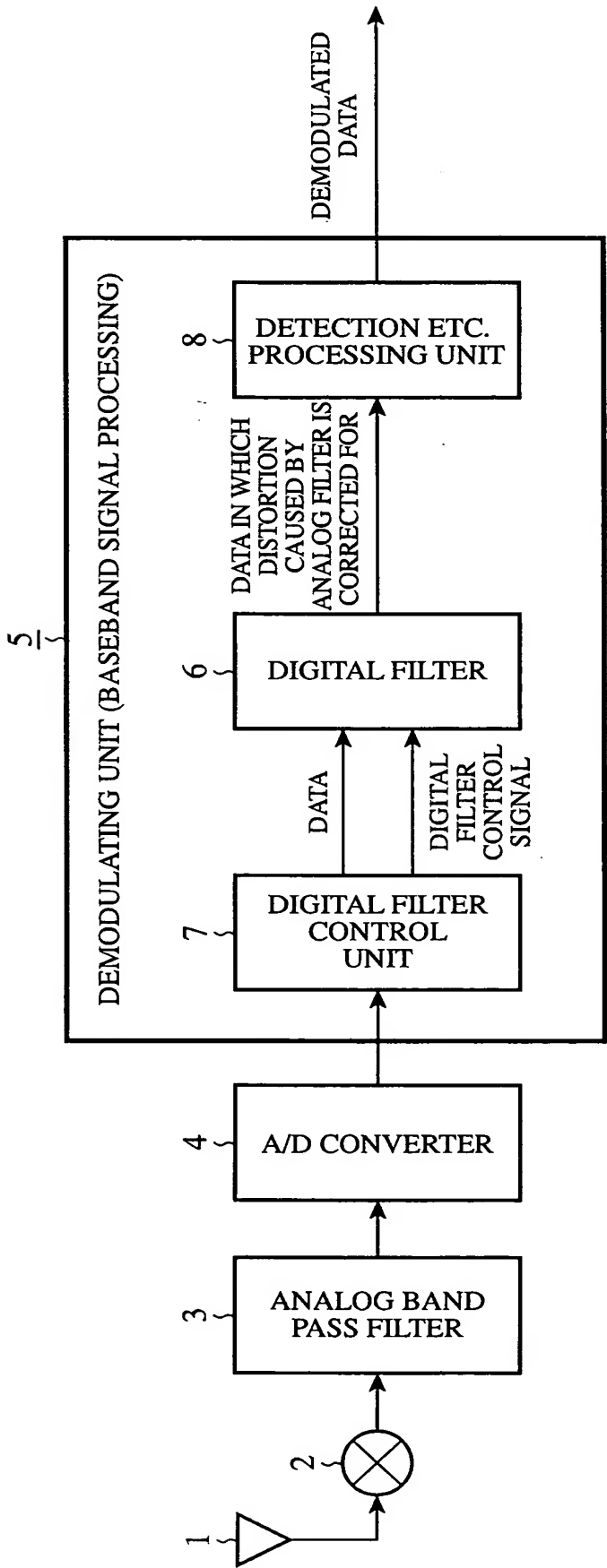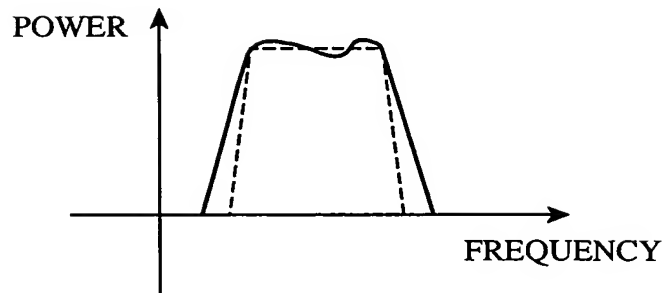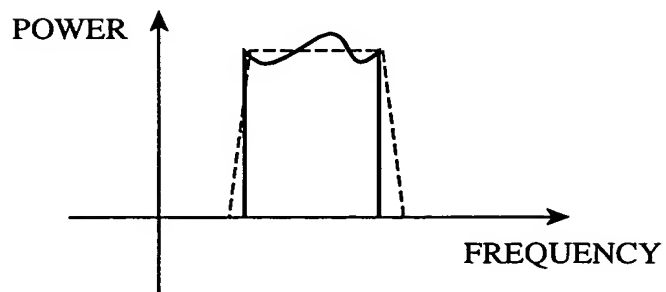
FIG.2

------ (DOTTED LINE) IDEAL BAND LIMITING

——— (SOLID LINE) BAND LIMITING BY ANALOG
BAND PASS FILTER

FIG.3

------ (DOTTED LINE) IDEAL BAND LIMITING

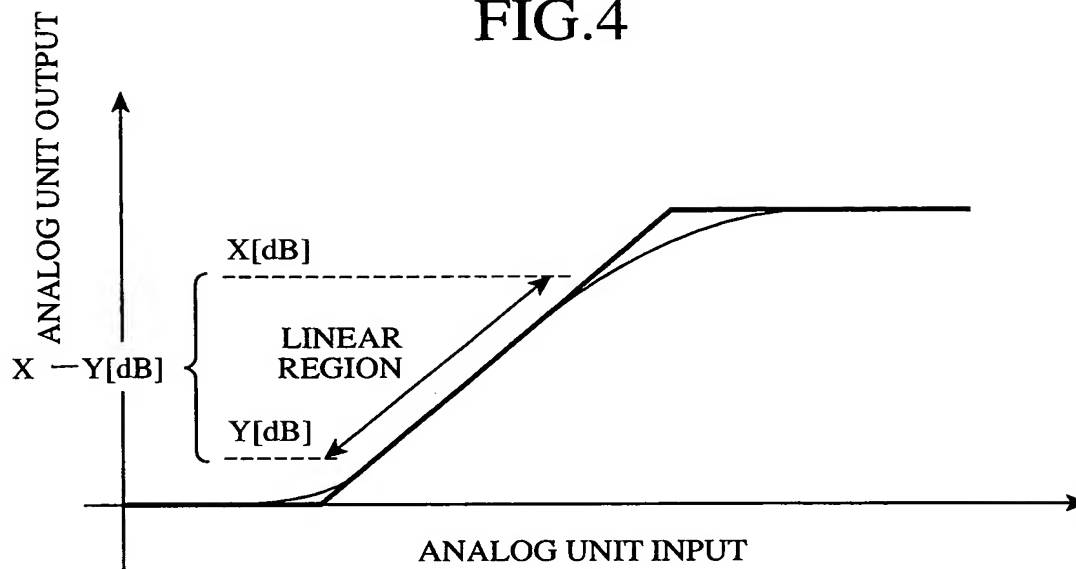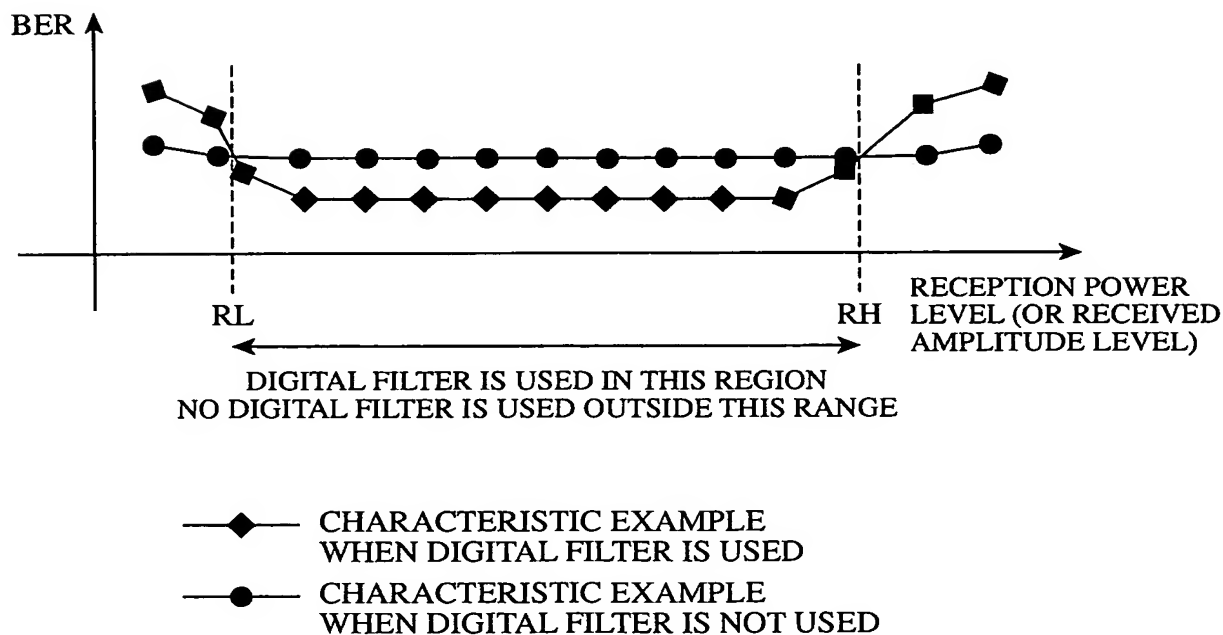——— (SOLID LINE) BAND LIMITING BY DIGITAL FILTER

FIG.4

ANALOG UNIT OUTPUT

X[dB]

X − Y[dB]

LINEAR REGION

Y[dB]

ANALOG UNIT INPUT

FIG.5

BER

RL

RH

RECEPTION POWER LEVEL (OR RECEIVED AMPLITUDE LEVEL)

DIGITAL FILTER IS USED IN THIS REGION
NO DIGITAL FILTER IS USED OUTSIDE THIS RANGE

◆— CHARACTERISTIC EXAMPLE WHEN DIGITAL FILTER IS USED

●— CHARACTERISTIC EXAMPLE WHEN DIGITAL FILTER IS NOT USED

FIG.6

RECEIVED SIGNAL → **RECEPTION POWER LEVEL DETECTOR** (11) → RECEPTION POWER LEVEL → **LEVEL COMPARISON UNIT** (13) → DIGITAL FILTER CONTROL SIGNAL

CONTROL CONDITION TABLE STORAGE UNIT (12)
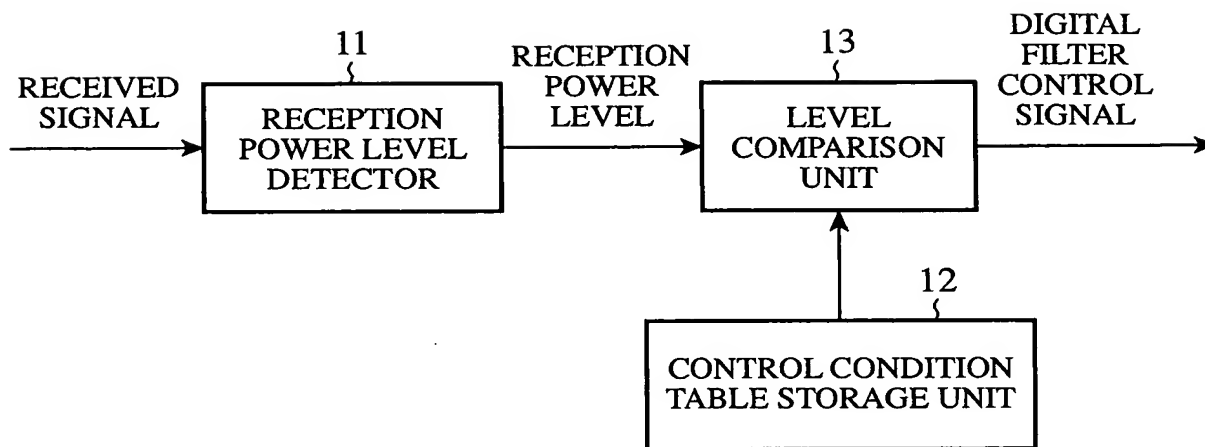
* RECEIVED AMPLITUDE LEVEL IS USED
INSTEAD OF RECEPTION POWER LEVEL

FIG.7

CONTROL CONDITION	DIGITAL FILTER CONTROL SIGNAL
RH$\geqq$RECEPTION POWER LEVEL$\geqq$RL	H : ON
RECEPTION POWER LEVEL>RH, RECEPTION POWER LEVEL<RL	L : OFF

* RECEIVED AMPLITUDE LEVEL IS USED
INSTEAD OF RECEPTION POWER LEVEL

FIG.8

DIGITAL FILTER
OUTPUT SIGNAL

DIGITAL FILTER CONTROL SIGNAL

RECEIVED SIGNAL
(BASEBAND)